

**TCET - Emissions Reducing Grant  
Demonstration of New Technology ¥ Project Status and Completion Report**

7. Abstract of work completed during the quarter

Cleaire submitted a verification application to EPA for the Longview system on September 18, 2002. The Cleaire Longview is an integrated device that reduces NO<sub>x</sub>, PM, HC and CO from diesel engine exhaust. The Longview consists of NO<sub>x</sub> reducing catalysts (NRC), a catalyzed diesel particulate filter (DPF), a reagent (diesel fuel) delivery system and a control system. The Longview is installed as a muffler replacement. The system is further described on the Cleaire website at [www.cleaire.com](http://www.cleaire.com). In 2003, Cleaire also plans to pursue verification for its Alliance product, which consists of an NRC and a diesel oxidation catalyst (DOC). The initial focus for the Longview and Alliance will be transit buses to be followed by line-haul trucks, vocational vehicles and off-road equipment.

Successful testing and field trials over many hours and miles since October 2001 have given Cleaire confidence to pursue California Air Resources Board (CARB) and US EPA verification for the Longview. Currently, Cleaire is in discussion with EPA on the test protocols and other matters that need to be finalized before EPA authorizes verification testing. Cleaire hopes to begin EPA testing at Southwest Research Institute (SwRI) in San Antonio, Texas by late January or early February 2003.

The TCET has generously provided a grant to Cleaire to pay for the EPA testing at Southwest Research Institute. Upon EPA verification, emission reductions provided by Longview systems installed on diesel engines in Texas will be creditable to the Texas state implementation plan. Both on-road and off-road diesel engines are a significant source of emissions. Deployment of the Longview, especially in the Houston-Galveston area, will make a significant contribution to the attainment of Texas clean air goals.

After testing the Longview at SwRI, the test data will be submitted to EPA. EPA has contracted with Research Triangle Institute (RTI) to manage much of the EPA's Environmental Technology Verification (ETV) program. Cleaire will work with EPA to keep the verification application moving through the review process.

On a parallel path, Cleaire submitted a verification application to CARB on December 13, 2002 for the Longview. The CARB verification application includes emission reduction and durability test data that demonstrate 30% NO<sub>x</sub> reduction and 85% PM reduction from the Longview over transient test cycles. HC and CO reductions on the order of 90% were also shown. Cleaire anticipates receiving CARB verification in February 2003. Cleaire is currently increasing manufacturing, distribution and support infrastructure to enable large-scale deployment in California to be followed soon thereafter in Texas and nationally.